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List of Claims:

Claim 1 (cancelled)

Claim 2 (previously presented): A fixed rate speech compression system for processing a frame of a speech signal, the fixed rate speech compression system comprising:

an encoder operable to encode a first part of the frame using common frame based encoding;

the common frame based encoding comprising pitch pre-processing to modify the waveform of the speech signal as a function of classification of the frame;

the encoder operable to select one of a first speech coding mode and a second speech coding mode to encode a second part of the frame.

Claim 3 (previously presented): The fixed rate speech compression system of claim 2, where the encoder is operable to continuously time warp the speech signal during pitch preprocessing when the frame is classified as indicative of increased voicing strength.

Claim 4 (previously presented): The fixed rate speech compression system of claim 2, where the encoder is operable to selectively perform continuous time warping of the speech signal during pitch preprocessing to introduce a variable delay of up to about twenty samples.

Claim 5 (previously presented): The fixed rate speech compression system of claim 2, where the encoder is operable to selectively estimate continuous time warping of the speech signal during pitch pre-processing by interpolation with Hamming weighted Sinc interpolation filters.

Claim 6 (previously presented): The fixed rate speech compression system of claim 2, where the encoder is operable to select the first speech coding mode as a function of

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classification of the frame as at least one of silence/background noise, noise-like unvoiced speech, unvoiced speech, onset speech, plosive speech and non-stationary voiced speech.

Claim 7 (previously presented): The fixed rate speech compression system of claim 2, where the encoder is operable to select the second speech coding mode as a function of classification of the frame as stationary voiced speech.

Claim 8 (previously presented): The fixed rate speech compression system of claim 2, where a frame classified as at least one of background noise and unvoiced speech remains unchanged by pitch pre-processing.

Claim 9 (previously presented): The fixed rate speech compression system of claim 2, where the encoder is operable to time shift the speech signal with pitch pre-processing in a frame classified as predominantly pulse-like unvoiced speech.

Claims 10-33 (cancelled)

Claim 34 (previously presented): A method of processing a frame of a speech signal with a fixed rate speech compression system, the method comprising:

encoding a first part of the frame with common frame based encoding, the common frame based encoding comprising:

classifying the frame;

pitch pre-processing to modify the waveform of the speech signal as a function of classification of the frame; and

selecting one of a first speech coding mode and a second speech coding mode to encode a second part of the frame.

Claim 35 (previously presented): The method of claim 34, where classifying the frame

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comprises classifying the frame as a function of pitch correlation information.

Claim 36 (previously presented): The method of claim 34, where pitch pre-processing comprises:

classifying the speech signal as indicative of increased voicing strength; and continuously time warping the frame of the speech signal to introduce a variable delay.

Claim 37 (previously presented): The method of claim 34, where pitch pre-processing comprises:

classifying the speech signal as predominantly pulse-like unvoiced speech; and time shifting the waveform as a function of an accumulated delay.

Claim 38 (previously presented): The method of claim 34, where pitch pre-processing comprises:

classifying the speech signal as at least one of predominantly background noise and predominantly unvoiced speech; and

resetting an accumulated delay without modification of the waveform.

Claim 39 (previously presented): The method of claim 34, where pitch pre-processing comprises modifying at least one pitch cycle of the speech signal to provide continuous time warping of the speech signal.

Claim 40 (previously presented): The method of claim 34, where selecting the first speech coding mode comprises classifying the frame as at least one of silence/background noise, noise-like unvoiced speech, unvoiced speech, onset speech, plosive speech and non-stationary voice speech.

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Claim 41 (previously presented): The method of claim 34, where selecting the second speech coding mode comprises classifying the frame as stationary voiced speech.

Claims 42-51 (cancelled)